

Self-Mutilation, Anorexia, and Dysmenorrhea in Obsessive Compulsive Disorder

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This report described 19 female patients ($M = 23.5$) diagnosed as obsessive compulsive disorder (OCD; DSM-III-R) who exhibited additional symptoms of self-mutilation, dysmenorrhea, and dysorexia. A biphasic pattern related to menstruation during the course of OCD emerged: Phase 1, amenorrheic—characterized by anorexia nervosa, amenorrhea, and aggressive behavior, and Phase 2, postamenorrheic—characterized by self-mutilation following the return of the menstrual cycle, dysorexia, and aggressive behavior. All mutilative acts were reported by the patients to be painless and consisted of slashes. Seventy percent of the patients were sexually abused during childhood. All patients underwent an open trial of clomipramine ($M = 200$ mg/day) for 6 months, and intensive behavior therapy for 8 weeks. Based on clinical observations and self-reports, there was a decrease in self-harm and OCD symptoms. The emergence of OCD, self-mutilation, dysorexia, and dysmenorrhea in a sequential manner may suggest a specific clinical syndrome or the presence of an OCD subset. A biological working hypothesis of a hypothalamic dysfunction with serotonergic participation was suggested. © 1995 by John Wiley & Sons, Inc.

Self-mutilation is a volitional act to harm one's own body without intention to cause death. It has been described in many psychiatric disorders and said to be part of habits (e.g., nail biting), cultural behaviors (e.g., tattooing), and of religious rites (e.g., circumcision). It is mostly found in four distinct populations: in mental retardation and other organic conditions (stereotypic self-mutilation such as head banging); psychoses (e.g., self-enucleation, autocastration, penectomy); personality disorders (mainly borderline

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personality disorders [BPD]); and in inmates (minor self-mutilation such as cutting or burning the skin; Favazza, 1989). In addition, self-mutilation has extensively been reported in Gilles de la Tourette syndrome (Van Woert, Jutowitz, Rosenbaum, & Bowers, 1976; Robertson, Trimble, & Lees, 1989), combined with anorexia nervosa (Yaryura-Tobias, 1979), and in Lesh-Nihan syndrome (Lesh & Nihan, 1964). An excellent review on self-mutilation has been published elsewhere (Winchel & Stanley, 1991).

Recently, several investigators (Yaryura-Tobias & Neziroglu, 1983; Primeau & Fontaine, 1987; Hollander, Papp, Campeas, DeCaria, & Liebowitz, 1988) have questioned the relationship between obsessive compulsive disorder (OCD) and self-harm. A preliminary study by Yaryura-Tobias and Neziroglu (1978) reported self-mutilation in a group of OCD patients with concomitant symptoms of amenorrhea, dysorexia (eating disorders), and physical and verbal aggression, whereas some investigators (Guiora, 1967; Rosenthal, Rinzler, Walsh, & Klausner, 1972; Simpson, 1973; Goldney & Simpson, 1975; Simpson, 1975; Takeuchi et al., 1986; Favazza, DeRossear, & Conterio, 1989) have associated self-harm without OCD to dysmenorrhea and dysorexia.

This report is a clinical description of a group of patients who exhibited OCD accompanied by self-mutilation, dysorexia, and dysmenorrhea.

METHODOLOGY AND CLINICAL DESCRIPTION

The following retrospective noncomparative report is based on 19 single female patients seen in an outpatient facility during the years 1987–1991. Their ages ranged from 13 to 39 ($M = 23.5$ years), with an onset of obsessive compulsive symptoms ranging from 8 to 12 ($M = 10$) years old.

All 19 patients fulfilled DSM-III-R (American Psychiatric Association, 1987) criteria for the diagnosis of OCD at the time of the consultation. The diagnoses of primary anorexia nervosa and bulimia also met DSM-III-R criteria. An organized interview consisting of a mental status examination and inquiries about the patient's past psychiatric, medical, family, and psychosocial history was conducted. Each patient was interviewed independently by a psychiatrist and by a psychologist and they both confirmed the diagnosis. For corroborative purposes, family members were interviewed as well without the presence of the patient. No history or clinical evidence of mental retardation, borderline personality disorder (BPD), psychosis, or imprisonment was elicited. None of the patients fulfilled the DSM-III-R criteria for BPD.

Although all patients came for consultation for their OCD, they all reported having had a history of anorexia, amenorrhea, self-mutilation, and physical and verbal aggression. Physical aggression consisted mostly of kicking and throwing objects or slamming doors. Aggressive acts were carried out only at home. The time sequence indicated that OCD symptoms preceded all other symptoms and remained throughout the course of their illness.

Within an average of 5 years after developing OCD symptoms, they became anorexic and subsequently amenorrheic. Within 2 years after improvement of their anorexia, they were no longer amenorrheic but exhibited dysorexia (e.g., overeating, binge eating, bulimia). At this point they manifested a compulsion for self-harm.

The clinical course that these women experienced was divided in two phases based on the combined absence or presence of the menstrual cycle and of self-harm as follows: Phase 1, Amenorrheic—characterized by anorexia nervosa, amenorrhea, obsessions, compulsions, and aggressive behavior; Phase 2, Postamenorrheic—characterized by the

onset of compulsive self-mutilation following the return of the menstrual cycle, dysorexia, and the continuous presence of obsessions, compulsions, and aggressive behavior.

Most of the obsessional context was morbid or frightening (e.g., fear of harming others). Compulsions included doublechecking and handwashing. All mutilative acts consisted primarily of slashing but 10% of the patients also reported head banging, cigarette burning, and biting oral mucosa or fingers. These acts were compulsive, ritualistic, usually painless, and capable of relieving tension. Scars were generally hidden from view; mostly made in areas covered by clothing, or in body cavities. If limbs were cut, patients avoided regions where blood vessels were close to the surface. The average number of scars was 40. During the amenorrheic phase, no self-mutilative acts were reported. Seventy percent of the patients were sexually and/or physically abused during their childhood.

All patients were treated with clomipramine (CMI) administered orally ($M = 200$ mg/day) for 6 months and intensive behavior therapy consisting of five 90-min sessions per week for a period of 8 weeks. The latter consisted of exposure and response prevention which is used in the treatment of OCD (Foa, Steketee, & Ozarow, 1985). This combined treatment appeared to decrease the intensity and frequency of self-harm and obsessive compulsive behaviors as reported by patients and their families.

CASE HISTORY

A 23-year-old, single female who had a bachelor's degree was dysfunctional and came for a consultation. She manifested continuous symptoms of obsessions which were morbid in nature and would occupy her mind for 3 hr or more during the course of a day. In addition, she had a compulsion to wash her hands and to rearrange her apartment once a day. She was unable to make decisions and had to depend on her mother to cope with most of her life situations. As a child, she had vague recollections of being sexually abused by her father at the age of 5 and of being physically abused by both parents. Later on, during therapeutic sessions, she was confronted with her parents. Her OCD symptoms could be traced back to age 7 or so. A diagnosis of primary anorexia nervosa was made at age 13, 1 year following her menarche. She recalls having no menstrual cycle and losing 30% of her weight. By age 17, her eating habits improved considerably, she graduated from high school, and registered for college. By age 18, she began to menstruate again. It was at this time that the patient began to cut herself. She stated that all throughout her life she felt resentful and angry towards her parents. At times, she would vent her anger by kicking or throwing objects. However, she had enough discipline and intelligence to obtain a bachelor's degree. When she came to see us, she had made over 100 cuts in her upper and lower limbs as well as on her abdomen. All cuts were superficial and symmetrical and caused her no pain. This patient was treated as indicated above for a period of 11 months. Treatment outcome was acceptable in that she stopped her self-harm, was able to readjust to life, and obtain a job. The confrontation with her parents, especially with her father, helped her to unload her resentment and anger and to reframe the parent-child relationship.

DISCUSSION

The following four clinical observations were made within this population. The first observation was the presence of two clinical phases which raises the question of whether

these two phases are physiologically related. What, if any, is the relationship between self-mutilation and menstruation? The return of the menstrual cycle may involve two components of the limbic system: the hypothalamus and the amygdala. The hypothalamus contributes to the secretion of two corticotropin hormones, follicle stimulating hormone (FSH) and luteinizing hormone (LH), both of which are required for menstruation (Guyton, 1981). The amygdala regulates rage (Mark, Ervin, & Sweet, 1972), which may be manifested as self-harm behavior. Therefore, a disturbance of the limbic system resulting in both self-mutilation and menstrual changes should be considered. Furthermore, amenorrhea and menstrual disturbances were noted in a group of wrist cutters (Rosenthal et al., 1972; Takeuchi et al., 1986). Whether these observations are sufficient to explain why patients begin to self-harm following the restitution of their menstruation warrant further research.

The second observation was based on our patients' description of their acts of self-harm as compulsive, ritualistic, meticulous, and painless. Lack of pain during self-harm has been associated to depersonalization, hysteria, or a transient analgesic state (Simpson, 1973; Takeuchi et al., 1986; Favazza & Conterio, 1989). Our patients seem to fall into the category of describing their act of self-harm as a transient analgesic state usually followed by pleasure, release of tension, or a feeling of well-being. Could this state be explained in biological terms? It was reported that in pairs of fighting mice, the defeated animal had elevated endorphin levels that caused subsequent analgesia (Miczek, Thompson, & Shuster, 1982). Likewise, in humans, pain stimulation releases endogenous endorphins (met-enkephalin; Coid, Allolio, & Rees, 1983). These findings were applied to children who were repeatedly attacked physically (Kirkmayer & Carroll, 1987) and no longer experienced pain, perhaps due to an increase of endorphins. It has also been reported that endorphins produce a pleasant feeling and control dysphoria (Favazza & Conterio, 1989). Furthermore, extremely high endorphin levels cause a down-regulation of endorphinergic pathways with the consequent build-up of dysphoria (Chu & Dill, 1990). These mechanisms actively maintain the analgesia-pain-pleasure circuit. Anecdotal reports indicated that the strongest evidence associating self-harm with the opiate system is the reduction of self-harm with the opiate antagonist naloxone in retarded patients (Sandyk, 1985; Richardson & Zaleski, 1983) and in one patient of normal intelligence (Sandman, Barron, Crinella, & Donnelly, 1987). Whether the painless act reported by our patients can be linked to an opiate-mediated mechanism is yet to be demonstrated.

The third observation was our patients' report of being sexually and physically abused. This was consistent with previous findings of childhood sexual and physical abuse (Favazza & Conterio, 1988; Chu & Dill, 1990) and incest (Shapiro, 1987) in self-harm. May these findings reported in 70% of our patients shed some light on the pathophysiology of the analgesia-pain circuit? We still need to account for the other 30% who did not report physical or sexual abuse. The lack of a larger sample limits the scope of our theoretical and empirical evidence.

Our fourth and final observation was a decrease in self-mutilation after the administration of CMI, a strong serotonin reuptake blocker. This finding confirmed previous reports indicating that CMI is an effective treatment for self-mutilation (Yaryura-Tobias & Neziroglu, 1978; Hollander et al., 1988; Lipinski, 1991), OCD (DeVeau-Geiss, Landau, & Katz, 1989), and anorexia nervosa (Lopez-Ibor & Lopez-Ibor Alino, 1971). In addition, the administration of fluoxetine, a selective serotonin reuptake blocker, has been successful in treating self-injurious behavior (Primeau & Fontaine, 1987). In this regard, it has been reported that self-mutilators have shown significant negative corre-

lations between the degree of self-mutilation and platelet imipramine binding (Simeon et al., 1992). Therefore, the favorable response to CMI therapy suggests a serotonergic mediating mechanism in the pathophysiology of self-mutilation. One caveat is to have combined CMI therapy with behavioral treatment, thus preventing us from determining whether a single or combined treatment should be chosen.

The presence of some evidence for the two theoretical postulates, opiates to explain the analgesic-pain circuit and serotonergic to explain the OCD-dysorexia-self-mutilation mosaic, is open for discussion. Is this cluster of emergent symptoms pure coincidence, an OCD variant, a comorbid process, or a pathological cerebral continuum (Yaryura-Tobias, 1990)? Meanwhile, clinicians treating OCD and eating disorders should be aware of the possibility of self-mutilation among their patients. Conversely, those treating self-mutilation may look for symptoms of OCD and eating disorders.

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